Andy Crossland

10/08/03 05:16 PM

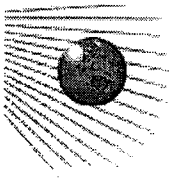
To: Martin Freeman/R2/USEPA/US@EPA
cc: Don Lynch/R2/USEPA/US@EPA, George Zachos/R2/USEPA/US@EPA, Robert Vaughn/R2/USEPA/US@EPA, RonaldM Naman/R2/USEPA/US@EPA
Subject: Re: Case 3282 - Update -September 29, 2003 Call From Anonymous Consultant Questioning BROS Response Approach

I just wanted to offer one impression which may be helpful. The concern is raised that BCEE is heavier than water and thus would behave as a DNAPL. This would only be an issue if the BCEE were present as a separate phase. The levels which have been detected downgradient of the site - and in the area to the south where the concern has been raised - are not in the realm that would indicate that a DNAPL was present nearby. If any areas of localized DNAPL exist at the site, they would likely be directly under the property where levels are more elevated. Note also that no DNAPL has been detected.

The upshot is that the concentrations which we see to the south and southeast of the property are not attibutable to free phase migration, but rather migration in the dissolved phase. Dissolved phase migration would not be effected by the density of the contaminant at question, as we are talking about parts per billion concentrations. The movement would be controlled by groundwater flow instead.

I hope that this is helpful and would be happy to talk to our concerned party if he would like to pursue a discussion.

---Andy
Martin Freeman



Martin Freeman

10/08/2003 04:02 PM

To: RonaldM Naman/R2/USEPA/US@EPA, Andy Crossland/R2/USEPA/US@EPA, Robert Vaughn/R2/USEPA/US@EPA, Don Lynch/R2/USEPA/US@EPA
cc: George Zachos/R2/USEPA/US
Subject: Case 3282 - Update -September 29, 2003 Call From Anonymous Consultant Questioning BROS Response Approach

The latest development on RPL case 3282 is that on 9/29/03 the RPL received a call from the consultant that has been expressing concerns about the BROS response. He requested that the RPL post for his review the following documents to an address in Pennsylvania:

1. **Updated Classification Exception /Well Restriction Area** ,Dated February 21, 2002.

2. Two (2) Figures # 12 & 23 from the **Site Characterization Report. Volumes 1& 2.** October 16, 2002. Figure 12 is the **Location of Homeowner Wells Sampled** and Figure 23 **Groundwater Elevation Map for the Base of the Upper Middle PRM Aquifer November 6, 2000.**

The requested materials were forwarded to him during the afternoon of 9/29/03.

He continued to made his assertion that he believes that the overall direction of flow of the groundwater in the aquifer is to the south. He was told that both the RPM and a Hydrogeologist working on the project firmly believed that the local site data that they received from the PRPs indicates a southeasterly direction

of flow for the groundwater in the area of the site. A request was made that he contact Andy Crossland directly and discuss this matter and his theories on groundwater flow with him.

He then stated that regardless of the direction of the ground water flow that the BCEE [Bis (2-chloroethyl)ether] is heavier than water and it will behave similar to a DNAPL. He asserted the theory that the BCEE would sink to the lower confining layer of the UPPER Middle PRM Aquifer and flow along the contour of the confining layer regardless of the groundwater direction. He feels the chemical would follow the downward slope of the confining layer notwithstanding the direction of the groundwater flow. He stated that he had worked on a site where he observed a similar situation occur. He appears to believe that based on his theory that the BCEE may have flowed to the south away from the site rather than to the Southeast in the groundwater.

He then again stated that the easiest way to either confirm or refute his concerns and theory would be to install a monitoring well on the south side of the site between wells MW 33 and MW 34. If access was an impediment to the installation of the well, he suggested that the monitoring well could be drilled in a local county road or the state highway right of way to avoid any access problems. He claimed to have taken this approach on other projects and that access and a well could be installed within a three week time frame.

This call ended with a commitment from the RPL that the information that he was requesting would be mailed to him ASAP and that the RPL would have a meeting to further discuss his concerns with the project team in October. He was requested to call back in a couple of weeks to further discuss the status of the sampling of some of the monitoring wells on the southern side of the site (MW Nos. 11,12,17,33, 34 & 35) and the outcome of the scheduled discussions with the site RPM and Hydrogeologist.